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NAVAL WAR COLLEGE  
Newport, R.I.



**Centralized Command and Control of Theater Missile Defense: The Joint Force  
Missile Defense Component Coordinator**

By

**William H. Bucey III  
Lieutenant Commander, U.S. Navy**

**A paper submitted to the Faculty of the Naval War College in partial satisfaction of  
the requirements of the Department of Joint Maritime Operations.**

**The contents of this paper reflect my own personal views and are not necessarily  
endorsed by the Naval War College or the Department of the Navy.**

Signature: \_\_\_\_\_

**William H. Bucey III**

**13 February 2006**

**Colonel William J. Hartig, JMO Department**

**Commander Dario E. Teicher, JMO Department**

## **ABSTRACT**

Theater missile defense, a deduced deficiency from Desert Storm, garnered much attention in the decade preceding Iraqi Freedom. While theater missile defense during Iraqi Freedom resulted in complete success by effortlessly countering all ballistic missiles fired from Iraq, missile technology and proliferation has exacerbated the need to reevaluate joint doctrine. The future combat environment requires theater missile defense to be at the forefront of the joint task force, vice being delegated down the command and control structure. The numerous commands, decentralized command and control, and limited and expensive resources involved in TMD require changes to the joint doctrine in order to provide unity of command and economy of force.

An examination of current doctrine and past performances in the missile defense arena reveal that a joint force missile defense component commander should be appointed in theaters requiring missile defense. This component commander should also have tactical control of joint forces possessing missile defense capabilities in order to truly give the joint force commander centralized command and control with decentralized execution of this critical mission.

## **INTRODUCTION**

Theater missile defense (TMD) came into existence when the first Iraqi missiles were fired during combat operations in Desert Storm. While unprepared for TMD in this encounter with Iraq, the United States military transformed itself and instituted joint doctrine to counter future missile threats. Operation Iraqi Freedom, a decade later, confirmed that these transformational changes came to fruition. The U.S. military has demonstrated it can defend against a limited missile threat, but will the current doctrine prepare the joint force commander (JFC) to command and control TMD assets effectively in the future threat environment?

U.S. joint military doctrine must incorporate a centralized command and control architecture with decentralized execution of TMD in an increasingly time sensitive and chaotic environment. This conventional characteristic of U.S. military doctrine, along with unity of command and economy of force, is essential to TMD in this new era of proliferation, failed states, terrorism, and uncertainty.

This paper will evaluate and analyze TMD in Operations Desert Storm and Iraqi Freedom to yield points of success and failure that prolong the TMD debate. Evaluation of current joint TMD doctrine will be viewed in light of potential future threats. Key points to this discussion involve the role of the area air defense commander (AADC) and the theater army air and missile defense coordinator (TAAMDCOORD). And finally, recommended changes to the joint doctrine will be discussed. Specifically, the addition of a joint force theater missile defense component commander with tactical control of TMD capable forces available in the theater of operations will be proposed. A short summation will conclude the paper.

## **DESERT STORM TO IRAQI FREEDOM**

In the wake of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, Saddam Hussein and his Baathist regime tested the new and reorganized United States military forces for the first time in 1991. Desert Storm operations would demonstrate that U.S. military forces were indeed improved, especially in areas of technology, training, and leadership. But what about the mainstay of Goldwater-Nichols: the requirement for a joint, flexible, and responsive force? Theater ballistic missile defense (TMD), primarily an Army mission in defending against more than 80 Iraqi Scud missiles fired at Israel and Saudi Arabia during Desert Storm<sup>1</sup>, caused the U.S. military to revisit its approach to creating this joint force. The conclusion of Operation Desert Storm launched an era of tactical missile defense and forced a change in the doctrinal approach to TMD.<sup>2</sup>

Desert Storm missile defense operations, despite Army leadership's story of Patriot missile defense system success, demonstrated the need for an integrated, technologically superior, and accurate missile defense system. U.S. and coalition forces were not adequately prepared for the threat of ballistic missiles; evidenced by Patriot systems being rushed into combat operations earlier than anticipated. In fact, when the first Scud attacks on Israel began on 18 January, 1991, Patriot batteries were not available

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<sup>1</sup> George N. Lewis, Steve Fetter, and Lisbeth Gronlund, Casualties and Damage from SCUD Attacks in the 1991 Gulf War, DACS Working Paper, no. 93-2 (Cambridge, MA: Center for International Studies, 1993), 1. The Defense and Arms Control Studies Program is a graduate-level, research and training program based at the MIT Center for International Studies. It is supported by grants from the Carnegie Corporation of New York, the Ford Foundation, the John D. and Catherine T. MacArthur Foundation, and the DACS Corporate Consortium.

<sup>2</sup> 32<sup>nd</sup> Army Air and Missile Defense Command, Operation Iraqi Freedom Theater Air and Missile Defense History (Fort Bliss, TX: 2003), 92. Written and published within months of the end of combat operations, this history is only a snapshot of Theater Air and Missile Defense operations during Operation Iraqi Freedom.

until twelve missiles had already been fired from Iraq. U.S. Army post-war analysis concluded that only 40 percent of Patriot engagements in Israel were successful.<sup>3</sup>

More important than the need for a better system aimed at ballistic missile defense, the Department of Defense (DOD) realized that the Army could no longer be solely responsible for this invaluable capability in the future. “Since there was no joint doctrine or concept of operations for theater missile defense (TMD), the commander in chief (CINC) decided what to protect with limited assets. It was readily apparent, though, that TMD was a joint mission.”<sup>4</sup> Integrating sea, land, and air assets under a common doctrine was a step in the right direction that proved successful in Operation Iraqi Freedom (OIF) more than a decade later. It was also readily apparent that a centralized command and control structure in the fight against missile threats was missing.

On 20 March, 2003, Iraq launched an Ababil-100 ballistic missile at coalition forces. Detection was immediate from a Navy Aegis Cruiser in the Persian Gulf and satellite sensors within U.S. Central Command’s missile defense system. Alarms were automatically sent via Air Force networks across the theater with a likely area of impact. Electronic instructions were passed to Patriot firing batteries, and moments later the correct battery fired three missiles at the Iraqi missile, destroying it with a direct hit.<sup>5</sup> This incident effectively illustrates the advancements in ballistic missile defense doctrine,

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<sup>3</sup> Lewis, Fetter, and Gronlund, 16.

<sup>4</sup> Robert M. Soofer, “Joint Theater Missile Defense Strategy,” Joint Forces Quarterly, (Autumn 1995): 70. Robert M. Soofer is a member of the Ballistic Missile Defense Organization. He wrote this article based on research conducted while attending the National War College. The term CINC is synonymous with Combatant Commander in the current lexicon.

<sup>5</sup> 32<sup>nd</sup> Army Air and Missile Defense Command, 92.

training, and weapons systems in the decade between encounters with Saddam Hussein's Iraqi forces. Of the eleven ballistic missiles fired at coalition forces during OIF, all were intercepted and destroyed or allowed to land harmlessly in areas where there was no threat to coalition personnel.<sup>6</sup>

U.S. ballistic missile defense was completely successful, in all relative terms, against eleven ballistic missile attacks in the second encounter with Iraq. TMD success in OIF, however, should not be confused with joint doctrine that enables successful TMD operations in any environment. None of the OIF missile attacks were very complicated. All of the launches were independent, single missile launches from individual sites. While joint doctrine made a giant leap forward in the ballistic missile defense arena between Desert Storm and Iraqi Freedom, the doctrine is not mature enough for the expected mass proliferation of ballistic missiles in the post-Iraq era and beyond. Moreover, the command and control architecture, developed out of experiences in the deserts of Iraq, is not organized to handle future threats. "The Patriot-Scud duels over the skies of Saudi Arabia and Israel foreshadowed the importance of missile defense capabilities for the future."<sup>7</sup> The examples of Desert Storm and Iraqi Freedom proved that a centralized command and control structure for missile defense, fully integrated within the joint environment, is essential to counter the threats likely to be posed by future ballistic missiles with greater range and accuracy, launches from coordinated sites, and the capability of carrying weapons of mass destruction.

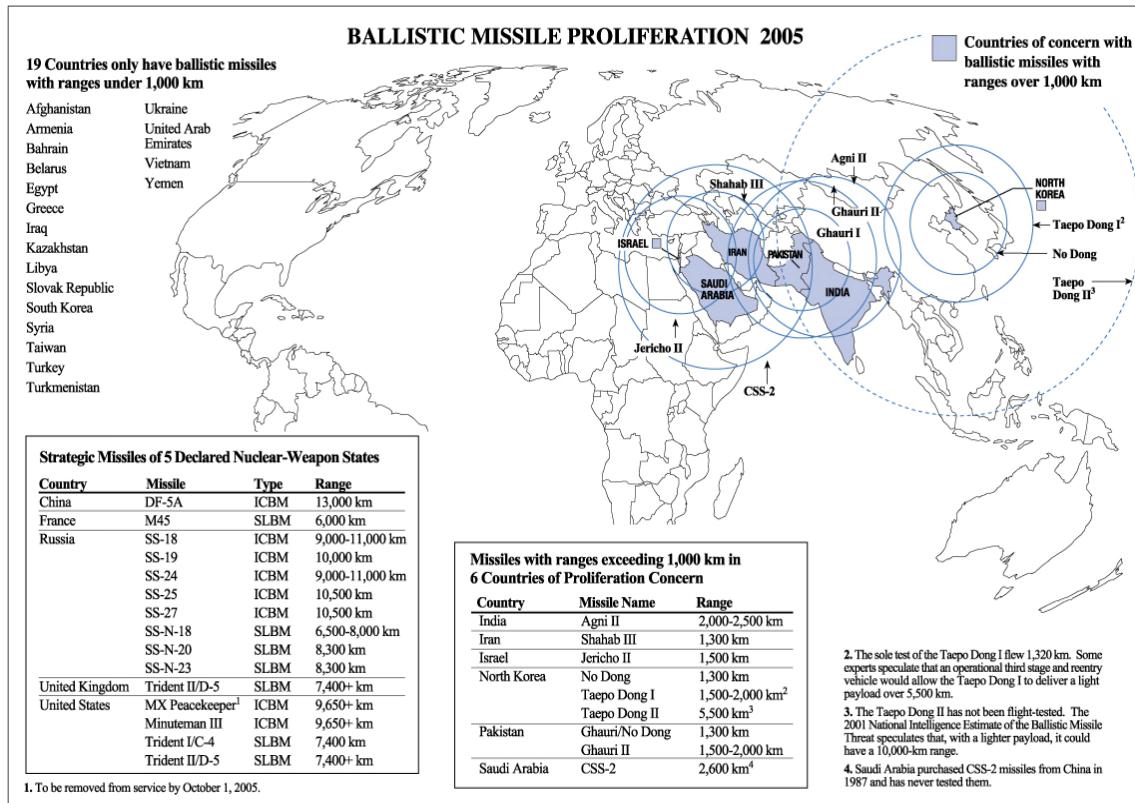
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<sup>6</sup> Ibid, 96.

<sup>7</sup> Keith B. Payne, Missile Defense In the 21<sup>st</sup> Century: Protection Against Limited Threats (Boulder, CO: Westview Press 1991), 28.

## **EVOLVEMENT OF JOINT MISSILE DEFENSE DOCTRINE**

Iraqi missiles were completely ineffective in Iraqi Freedom and lead one to believe U.S. missile defense doctrine proved its worth on the battlefield. However, to fully understand the complex issues involved in missile defense command and control, one must explore the joint missile defense doctrine to distinguish between success in Iraqi Freedom and preparedness for engagements and operations in the future. To accomplish this goal, current joint doctrine and command and control architecture will be evaluated not on the basis of operations within Iraq, but in light of future threats. Missile technology and proliferation has steadily increased over the last several decades and shows no sign of slowing (See Figure 1 below<sup>8</sup>). Preparing the joint force



**Figure 1**

<sup>8</sup> "Missile Proliferation Status 2005," Lkd. Carnegie Endowment for International Peace at "Proliferation News and Resources Page," <http://www.carnegieendowment.org/npp/>, [14 January 2006].

commander to counter these evolving missile threats is crucial to both U.S. and coalition forces engaging in operations throughout the world.

Following Desert Storm, theater missile defense was an obvious flaw that demanded the highest amount of attention from the Pentagon. It also caused a known missile defense advocate to write the following:

“When the first Patriot missile rose to meet an incoming Iraqi Scud during the Persian Gulf War, it heralded the age of anti-tactical missile defense. As ballistic missiles proliferate, theater missile defense will continue to receive attention and resources while planners and commanders are considering its political and military implications. The deterrent value of such capabilities will be threatened without a defense against area ballistic missile threats. That protection will require a variety of TMD options as well as careful coordination among all the services, the NATO Alliance, and ad hoc coalition partners.”<sup>9</sup>

The most important observation is that coordination amongst the services is the key element of theater missile defense. It has already been stated that the Army was the prime driver of missile defense in Desert Storm. In evaluating the key points of doctrine evolution, one must continue to ask if the command and control is aligned to produce theater missile defense that is dynamic, flexible, adaptive, and joint.

Realizing the imminent dangers inherent to TMD, a centralized and joint approach to the TMD organization was planned.<sup>10</sup> The first step was the development and implementation of the Joint Doctrine. This doctrine has been updated over the decade between operations in Iraq and has laid the groundwork for Joint Task Force (JTF) command and control throughout the spectrum of military functions. The four

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<sup>9</sup> Dennis McDowell, “Theater Missile Defense: A Joint Enterprise,” Joint Forces Quarterly, (Winter 1993-94): 80. Dennis McDowell is a foreign affairs officer with the Arms Control and Disarmament Agency. He was a delegate to both the Strategic Arms Reduction Talks (1982-88) and the U.S.-Soviet Defense and Space Talks (1989-91).

<sup>10</sup> Ibid, 86.

functional areas of theater missile defense are passive defense, active defense, attack operations, and TMD command, control, communications, computers, and intelligence (C4I).<sup>11</sup> Joint Publication 5-00.2 gives the commander of the joint task force the option to organize either by service components or functional components as evidenced by Figure 2 and Figure 3 below.<sup>12</sup>

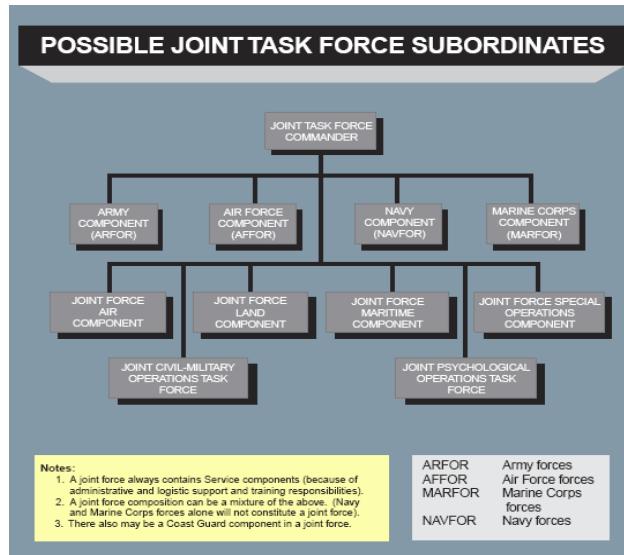


Figure 2

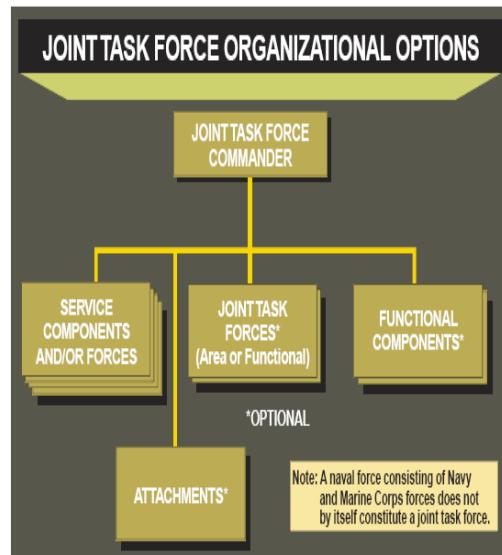


Figure 3

TMD requires the capabilities of all service and functional components. In addition to the Joint Force Commander's overall responsibility, where do joint theater missile defense (JTMD) direction, planning, and execution responsibilities reside in the joint task force organizational structure? Joint doctrine states "component commanders plan and execute JTMD operations as directed by the JFC." The very idea of several

<sup>11</sup> Joint Chiefs of Staff, Doctrine for Joint Theater Missile Defense, Joint Pub 3-01.5 (Washington, DC: 22 February 1996), IX.

<sup>12</sup> Joint Chiefs of Staff, Joint Task Force Planning Guidance and Procedures, Joint Pub 5-00.2 (Washington, DC: 13 January 1999), III-1 and I-1. Figure 1 and Figure 2 are taken directly from Joint Pub 5-00.2.

component or functional commanders being simultaneously responsible for TMD does not provide centralized command and control, unity of effort, or economy of force.

The JFC usually assigns a single commander to integrate the TMD efforts. Joint Publication 3-01.5 states “The JFC normally assigns overall responsibility for theater JOA air defense, to include active defense TMD, to the AADC.”<sup>13</sup> As previously mentioned, active defense is only one of the four tenants of TMD. The Area Air Defense Commander (AADC) “assists the JFC in determining missions, communications priorities, rules of engagement for active defense forces based on assessment and prioritization of forces, critical assets, and population centers to protect.”<sup>14</sup> Component commanders must coordinate amongst each other, the AADC, and the JFC because of compressed time lines and constricted flight times inherent in JTMD operations.<sup>15</sup>

The creation of the AADC may lead some to believe a streamlined command and control architecture for JTMD operations is now under one commander. The problem with this concept is that the AADC is normally assigned to the Joint Forces Air Component Commander (JFACC). JFACC normally has the most responsibility in TMD because of the numerous attack assets assigned; however the JFACC is also responsible for airspace control and all air operations in theater. In other words, the JFACC normally delegates the TMD mission to the AADC who resides one command level below the component commanders. A tremendous amount of coordination is required in order for the AADC to effectively defend against missile threats. The AADC must accomplish this mission in a critically time sensitive environment while receiving cueing information

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<sup>13</sup> Joint Chiefs of Staff, Doctrine for Joint Theater Missile Defense, X.

<sup>14</sup> Ibid, X.

<sup>15</sup> Ibid, II-7.

from a myriad of joint and national sources. Furthermore, the AADC is only the air component commander's piece to the TMD puzzle. The ground forces can also point to doctrine reaffirming its role in TMD.

In October of 1998, the 32<sup>nd</sup> Army Air and Missile Defense Command (32<sup>nd</sup> AAMDC) was established. Similar to the role of the AADC, this unit was designed "to be the Army Forces (ARFOR) and the Joint Forces Land Component Commander's (JFLCC) organization for TAMD planning, integration, coordination and execution functions."<sup>16</sup> This headquarters is staffed with experts from the Army's air defense community along with special operations, aviation, intelligence, and chemical personnel. The headquarters would also send liaison representatives to theater level commands and all joint force component commanders in order to coordinate TMD operations in all four functional areas. The commanding general of the 32<sup>nd</sup> AAMDC was designated as both the Deputy Area Air Defense Commander (DAADC) to JFACC and the Theater Army Air and Missile Defense Coordinator (TAAMDCOORD) to JFLCC during Operation Iraqi Freedom.<sup>17</sup> The 32<sup>nd</sup> AAMDC's history of OIF points to the inherent jointness of such an organizational architecture by stating "Theater Air and Missile Defense became a truly joint and coalition effort."<sup>18</sup> I believe this structure only magnifies the muddled concept of centralized command and control currently instituted in joint doctrine.

Successful TMD requires an integrated approach to all four functional areas along with integration amongst all services, coalition members, and ad hoc partners. To encapsulate the TMD command and control responsibilities within the current joint

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<sup>16</sup> 32<sup>nd</sup> Army Air and Missile Defense Command, 11.

<sup>17</sup> Ibid, 92.

<sup>18</sup> 32<sup>nd</sup> Army Air and Missile Defense Command, 92.

doctrine, one must start with the Joint Force Commander. The JFC's guidance, objectives and organizational structure defines TMD at the operational level. Component commanders for each service or functional commanders fall one level below the JFC and are responsible for planning and executing JTMD operations. An AADC is usually assigned under the air component commander and has the responsibility for overall air defense of the theater, including the active defense phase of TMD. The 32<sup>nd</sup> AAMDC is yet another headquarters, under the ground forces component commander, whose focus is TMD planning and execution. And finally, the joint forces used in TMD are under the operational control of their individual component commanders. While this current doctrine definitely endorses decentralized execution of JTMD, the multiple and numerous entities involved do not create an environment that institutes centralized command and control of this critical and time sensitive mission.

### **CENTRALIZED TMD COMMAND AND CONTROL**

A recent paper published by the USAF Counterproliferation Center states that United States intelligence agencies have made the following key assertion regarding future ballistic missile threats:

“While only a relative handful of countries have significant ballistic missile capabilities, some of those countries are among the least responsible in the world, have expressed the most hostility toward the United States, and have demonstrated a disregard for international agreements and norms of behavior.”<sup>19</sup>

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<sup>19</sup> Jeffrey A. Larsen and Kerry M. Kartchner, Emerging Missile Challenges and Improving Active Defenses, The Counterproliferation Papers Future Warfare Series, no. 25 (Maxwell Air Force Base, AL: USAF Counterproliferation Center, 2004), 9. The Counterproliferation Papers Series was established by the USAF Counterproliferation Center to provide information and analysis to assist the understanding of the U.S. national security policy-makers and USAF officers to help them better prepare to counter the threat from weapons of mass destruction.

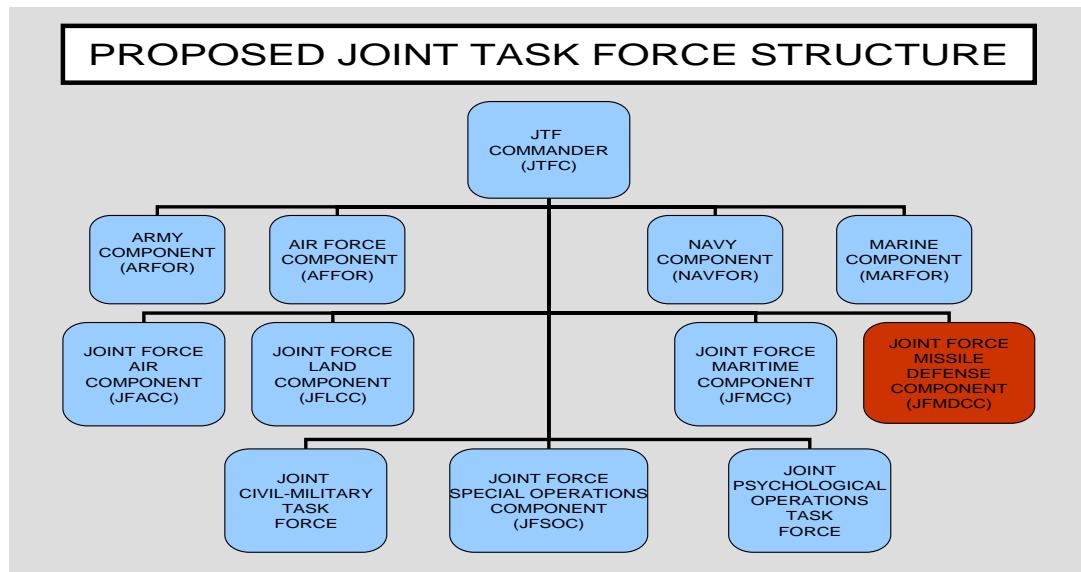
Missiles, ballistic or others, have the ability to cause severe damage to key infrastructure and inflict tremendous casualties to the joint force. The future environment of joint warfare is no longer rooted in the doctrinal age of the Cold War. The superior military of the United States limits potential adversaries in their ability to wage war conventionally, and has led to increased levels of missile technology proliferation and cooperation between countries that have this technology. The future operational environment will likely be more complex, dangerous, and unconventional than previous engagements where missile defense capabilities were successfully applied. The Cold War is over and operations in Iraq are not commensurate with what can be expected in future crisis operations U.S. military forces will likely face.

If we are to believe statements like the USAF Counterproliferation Center made above, and I think we should, why does theater missile defense not occupy a command and control relationship proportionate with its importance in the battle space? Missile proliferation and missile defense technology and systems continue to evolve, however U.S. joint doctrine for TMD remains stagnant. Two doctrinal changes are recommended that will enable the JFC to properly defend against future missile threats. First, a Joint Force Missile Defense Component Commander (JFMDCC) must be established in order to centralize the command and control of this critical mission. And secondly, the envisioned JFMDCC must be afforded tactical control of the joint forces used to accomplish TMD missions in order to promote unity of effort and economy of very limited resources and forces.

The TMD mission has become significantly more complex now than the threat faced during Desert Storm. Increased missile proliferation means that TMD will become more significant than previously predicted and could lead to disastrous results if the joint doctrine remains stagnant in TMD. This critical mission can no longer be parsed out to joint task force component commanders that are primarily responsible for land, air, or sea operations. Authority and responsibility for TMD should not be delegated below the component commander level. The establishment of a JFMDCC would accomplish the following:

- Centralize command and control of TMD
- Focus planning, training, and execution of TMD missions, including all four functional areas, under the direction of a single commander
- Fully integrate all service component TMD capabilities
- Provide more accurate recommendations to JFC regarding the employment and allocation of limited TMD resources and forces
- Provide a competent equal among the other component commanders to coordinate and deconflict TMD operations and missions
- Allow other component commanders to focus on their primary mission
- Prevent traditional stovepipe TMD organizations within the other component commander's staff

A proposed joint task force structure (see Figure 4 below) places the JFMDCC on



**Figure 4**

equal ground with the other component commanders. All component commanders will still be required to coordinate with each other to support and deconflict TMD missions, but economy of force and unity of command will be established by this proposed recommendation.

The second recommended change to joint doctrine is to give tactical control of joint TMD forces to the newly established JFMDCC. The conflicts with Iraq were fought against an adversary that had very limited capabilities. These conflicts had very brief and successful conventional phases associated with them.<sup>20</sup> Future conflicts, with numerous and complex missile threats, will require the antiquated TMD doctrine currently in place to change. Reliance upon computers and technology to effectively time alternating roles of joint forces between conventional component commands and TMD is a dangerous road to continue down.

Under current joint doctrine it is easy to comprehend a future operation where an Aegis cruiser or a Patriot battery, under the tactical control of the carrier strike group commander or air defense artillery brigade respectively, would be simultaneously providing passive warning or active defense in the TMD role. A potentially catastrophic situation would ensue if the strike group commander or brigade commander maneuvered these forces to better suit the operational needs of the air or land force component commanders. A large and unacceptable gap would be left in TMD that could easily be exploited by the enemy. An argument can be made that proper coordination amongst component commanders could

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<sup>20</sup> Williamson Murray and Robert H. Scales, Jr., The Iraq War: A Military History (Cambridge, MA: The Belknap Press of Harvard University Press 2003), 183.

easily solve this problem. While this is true, it has already been established that current TMD doctrine possesses many stovepipe organizations within each component command staff. The TMD role has also been delegated below the component commander level and would require even more coordination to deconflict forces and resources in the mentioned example.

Tactical control of the joint TMD forces should reside with the component commander responsible for TMD. Giving TACON of TMD forces to the JFMDCC would accomplish the following:

- Centralize command and control of all joint TMD capable forces
- Give the JFMDCC authority to accomplish TMD operations and missions assigned
- Enable the JFMDCC to properly plan, train, deconflict, and execute TMD missions among the other component commanders
- Provide more accurate recommendations to JFC regarding the employment and allocation of limited TMD resources and forces

## **CONCLUSION**

Operation Desert Storm initiated the U.S. joint force into a new era of tactical missile defense. Analysis of this conflict produced the basis of the joint doctrine now employed by the U.S. military forces. Theater missile defense, a deduced deficiency from Desert Storm, garnered much attention in the decade preceding Iraqi Freedom. And while TMD in Iraqi Freedom resulted in complete success countering all ballistic missiles fired from Iraq, missile technology and proliferation has exacerbated the need to reevaluate joint doctrine after a second conventionally successful combat operation in Iraq.

The Quadrennial Defense Review report of 30 September 2001 stated “The pace and scale of recent ballistic missile proliferation has exceeded earlier intelligence estimates and suggests these challenges may grow at a faster pace than previously expected.”<sup>21</sup> This environment requires TMD to be at the forefront of the joint task force, vice being delegated down the command and control structure. The numerous commands, decentralized command and control, and limited and expensive resources involved in TMD require changes to the joint doctrine in order to provide unity of command and economy of force. Specifically, a joint force missile defense component commander should be appointed in theaters requiring missile defense. This TMD component commander should also have tactical control of joint forces possessing TMD capabilities in order to truly give the joint force commander centralized command and control with decentralized execution of this critical mission.

Future combat operations in an increasingly complex environment force military planners to constantly reevaluate doctrine, training, and tactics. Theater missile defense is inherently time-sensitive and requires a centralized command and control structure to effectively counter these threats. Success in the last war has been proven throughout history to have little correlation to future wars. The creation of a theater missile defense component commander will ensure the joint force commander is prepared to fight the future war.

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<sup>21</sup> U.S. Department of Defense, Quadrennial Defense Review Report (30 September 2001): 7; quoted in Norman Polmar, “Ballistic Missile Defense...From the Sea,” U.S. Naval Institute Proceedings (June 2003): 86.

## **APPENDIX A**

The following definitions were culled from Joint Publication 3-01.5, Doctrine for Joint Theater Missile Defense, dated 22 February 1996 and Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms, dated 12 April 2001 (as amended through 31 August 2005).

**Area Air Defense Commander (AADC)**...Within a unified command, subordinate unified command, or joint task force, the command will assign overall responsibility for air defense to a single commander. Normally, this will be the component commander with the preponderance of air defense capability and the command, control, and communications capability to plan and execute integrated air defense operations. Representation from the other components involved will be provided, as appropriate, to the area air defense commander's headquarters. Also called AADC.

**Area of Responsibility (AOR)**...1. The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. 2. In naval usage, a predefined area of enemy terrain for which supporting ships are responsible for covering by fire on known targets or targets of opportunity and by observation. Also called AOR.

**Combatant Commander**...A commander in chief of one of the unified or specified combatant commands established by the President. Also called CINC.

**Joint Doctrine**...Fundamental principles that guide the employment of US military forces in coordinated action toward a common objective. Joint doctrine contained in joint publications also includes terms, tactics, techniques, and procedures. It is authoritative but requires judgment in application.

**Joint Force**...A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments operation under a single joint force commander.

**Joint Force Air Component Commander (JFACC)**...The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of assigned, attached, and/or made available for tasking air forces; planning and coordinating air operations; or accomplishing such operational missions as may be assigned. The joint force air component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander. Also called JFACC.

**Joint Force Commander (JFC)**...A general term applied to a combatant commander, subunified commander, or joint task force commander authorized to

exercise combatant command (command authority) or operational control over a joint force. Also called JFC.

**Joint Force Maritime Component Commander (JFMCC)**... The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of assigned, attached, and/or made available for tasking maritime forces and assets; planning and coordinating maritime operations; or accomplishing such operational missions as may be assigned. The joint force maritime component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander. Also called JFMCC.

**Joint Force Special Operations Component Commander (JFSOC)**... The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of assigned, attached, and/or made available for tasking special operations forces and assets; planning and coordinating special operations; or accomplishing such operational missions as may be assigned. The joint force special operations component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander. Also called JFSOC.

**Joint Operations Area (JOA)**... An area of land, sea, and airspace, defined by a geographic combatant commander or subordinate unified commander, in which a joint force commander (normally a joint task force commander) conducts military operations to accomplish a specific mission. Joint operations areas are particularly useful when operations are limited in scope and geographic area or when operations are to be conducted on the boundaries between theaters. Also called JOA.

**Joint Theater Missile Defense (JTMD)**... The integration of joint force capabilities to destroy enemy theater missiles in flight or prior to launch or otherwise disrupt the enemy's theater missile operations through an appropriate mix of mutually supportive passive missile defense; active missile defense; attack operations; and supporting command, control, communications, computers, and intelligence measures. Enemy theater missiles are those which are aimed at targets outside the continental United States. Also called JTMD.

**Operational Control (OPCON)**... Command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority) and may be delegated within the command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Operational control is the authority to perform those functions of command over subordinate forces involving

organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the command in operational control considers necessary to accomplish assigned missions; it does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON.

**Tactical Control (TACON)**...Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Tactical control provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets within the assigned mission or task. Also called TACON.

**Theater Missile**...A missile, which may be a ballistic missile, a cruise missile, or an air-to-surface missile (not including short-range, non-nuclear, direct fire missiles, bombs, or rockets such as Maverick or wire-guided missiles), whose target is within a given theater of operation.

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